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TITLE: SIZING AGENT FOR CARBON FIBER STRAND, SIZE-  
TREATED CARBON FIBER STRAND AND PREPREG REINFORCED BY  
THE CARBON FIBER AS REINFORCING FIBER

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ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a sizing agent for carbon fiber strands capable of satisfying fiber opening and fretting resistant properties, excellent in resin impregnation of a prepreg and satisfying complex material characteristics, size-treated carbon fiber and a prepreg reinforced by the size-treated carbon fiber as a reinforcing fiber.

SOLUTION: This sizing agent for carbon fiber strands essentially contains the following components and the sum total of the components A and B is

&ge;50wt.% and &le;85wt.%; the component (A): 20-50wt.% of a bisphenol A type epoxy resin which is a liquid at ordinary temperatures the component (B): 20-50wt.% of a bisphenol A type epoxy resin which is a solid at ordinary temperatures, the component (C): 10-30wt.% of a water-soluble polyurethane resin having 90-160&deg;C film flowing temperature and the component (D): 5-20wt.% stearic acid ester. A prepreg is produced by using the carbon fiber strands which are size-treated with the sizing agent as a reinforcing fiber.

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